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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/926,408	02/04/2002	Robbie Thielemans	THIE3004/JEK	2069

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EXAMINER	
DHARIA, PRABODH M	
ART UNIT	**PAPER NUMBER**
2673	

DATE MAILED: 11/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/926,408	THIELEMANS ET AL.	
	Examiner	Art Unit	
	Prabodh M. Dharia	2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *29-50 and 53-62* is/are pending in the application.

4a) Of the above claim(s) *1-28,51 and 52* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *29-41,43-50,53-62* is/are rejected.

7)☒ Claim(s) *42* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 October 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because abstract is not on a separate sheet and word count exceeds 150. Correction is required. See MPEP § 608.01(b).

4. **Status:** Receipt is acknowledged of papers submitted on 02-02-2005 under amendments and new claims have been placed of record in the file. Claims 29-50,53-62 are pending in this action. Claims 1-28, 51,52 are cancelled.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 29-33, 37,38, 49,50,53-58,60,61 are rejected under 35 U.S.C. 103(a) as being unpatentahle over Nishida (U.S. 6,097,351) in view of Tanikoshi et al. (U.S. 5,634,018).

Regarding independent claims 29 and 53, and for claims 49, 50 and 54, Nishida teaches a display device including an array of display elements to display information in that the display device is made up of a plurality of display units 50 (see Abstract; see also column 6, lines 17-21, figure 2 at 50). Furthermore, Nishida teaches a general processing unit in the form of a control device 70, a display in the form of device casing 100 that consists of several device display units 50, and individual processing units in the form of controller 53 per display units 50 (see figure 2, 3 at 50, 53, 70, 100, column 6, lines 17-33; column 7, lines 1-8). Furthermore, Nishida teaches how the control device 70 is provided for generating display signals to be supplied to the respective display units 50 through a signal transmission passage 71 (column 6, lines 30-33, figure 2 at 50, 70, 71). Also, Nishida teaches how the control device 70; electric power passage 61 and signal transmission passage 71 facilitates the control communication between the control device 70 and each of the display units 50 in the form of signal transmission passage 71 wherein data from this signal transmission passage are collected at every display unit 50 (column 6, lines 29-45, figure 2 at 50, 70, 71).

However, Nishida does not teach how the control communication sent from the general processing unit to each of the individual processing units are individually distinct from the data stream sent to each processing unit. On the other hand, Tanikoshi et al. teaches such a feature by

teaching plurality of screens (Col. 2, lines 50-53) and plurality of displays (Col. 3, Lines 59-62) wherein the control communication sent from information control section (figure 5, item # 54, page 9, Lines 62,63) to each of the information generating section (figure 5, item # 52,63) individuallydistinct from data stream sent out by drawing control section to display (figure 5, item # 50,51, Col. 9, Lines 59,60).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Nishida and Tanikoshi et al. because while Nishida teaches how the control device 70 is provided for generating display signals to be supplied to the respective display units 50 through a signal transmission passage 71 (column 6, lines 30-33, figure 2 at 50, 70, 71), Tanikoshi et al. teaches how such a device would be used to adjust display parameters. The motivation for combining these inventions would have been to provide a multiscreen display or plurality of displays apparatus capable of controlling parameters of a plurality of display units with attribute provided (Col. 9, Lines 29-33).

Regarding claim 30, in further discussion of claim 1, Nishida teaches how the display units 50 are serially coupled (figure 2 at 50).

Regarding claim 31, in further discussion of claim 1, Nishida teaches how the display units would be made up of light emitting diodes (column 8, lines 41-67, figure 5 at 83R, 83G, 83B).

Regarding claim 32, in further discussion of claim 1, Nishida teaches how the control device 70, electric power passage 61 and signal transmission passage 71 facilitates the control communication between the control device 70 and each of the display units 50 in the form of signal transmission passage 71 wherein data from this signal transmission passage are collected at every display unit 50 (column 6, lines 29-45, figure 2 at 50, 70, 71).

Regarding claim 33, Nishida teaches an embodiment wherein individual display units 80 include a main body 81 that contains three light emitting diodes 83R, 83G, 83B such that when activated, they present red, green and blue colors to the pixels (column 8, lines 41-67, figure 5 at 83R, 83G, 83B).

Tanikoshi et al. teaches how such a device would be used to adjust display parameters. The motivation for combining these inventions would have been to provide a multiscreen display or plurality of displays apparatus capable of controlling parameters of a plurality of display units with attribute provided (Col. 9, Lines29-33).

Regarding claim 37, Nishida teaches how distributed signal processing is at least provided for the signals by teaching how the control device 70, electric power passage 61 and signal transmission passage 71 facilitates the control communication between the control device 70 and each of the display units 50 in the form of signal transmission passage 71 wherein data from this signal transmission passage are collected at every display unit 50 (column 6, lines 29-45, figure 2 at 50, 70, 71).

Regarding claim 38, Nishida teaches how signal processing occurs at both the control device 70 and the display units 50 by teaching how the control device 70, electric power passage 61 and signal transmission passage 71 facilitates the control communication between the control device 70 and each of the display units 50 in the form of signal transmission passage 71 wherein data from this signal transmission passage are collected at every display unit 50 (column 6, lines 29-45, figure 2 at 50, 70, 71).

Regarding claims 55 and 56, Nishida teaches how the respective display units 80 can be removed for operational tests thereby making maintenance work very simple (column 10, lines 43-49, figure 10 at 80).

Regarding claims 57, 58, 60 and 61, in further discussion of claims 29 and 53, Tanikoshi et al. teaches how the control communication sent from the general processing unit to each of the individual processing units are individually distinct from the data stream sent to each processing unit by teaching an invention that relates to plurality of screens (Col. 2, lines 50-53) and plurality of displays (Col. 3, Lines 59-62) wherein the control communication sent from information control section (figure 5, item # 54, page 9, Lines 62,63) to each of the information generating section (figure 5, item # 52,63) individuallydistinct from data stream sent out by drawing control section to display (figure 5, item # 50,51, Col. 9, Lines 59,60).

7. Claims 34-36, 39-41,43,44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida (U.S. 6,097,351) in view of Tanikoshi et al. (U.S. 5,634,018) as applied to claims 29-33, 37,38, 49,50,53-61 above, and further in view of Zavracky et al. (US 2002/0158823 A1).

Regarding claims 34-36, Nishida does not teach how to adjust the brightness or contrast of the display device. On the other hand, and Tanikoshi et al. teaches such a feature by teaching plurality of screens (Col. 2, lines 50-53) and plurality of displays (Col. 3, Lines 59-62) wherein the control communication sent from information control section (figure 5, item # 54, page 9, Lines 62,63) to each of the information generating section (figure 5, item # 52,63) individuallydistinct from data stream sent out by drawing control section to display (figure 5, item # 50,51, Col. 9, Lines 59,60). However, Nishida modified by Tanikoshi et al. fails to recite or disclose specifically a multi display apparatus adjustment of color brightness, contrast by dynamic sample weight distribution (by correcting gray scale), correction according to temperature enlargement and transfer function. On the other hand, Zavracky et al. teaches in a multi display apparatus adjustment of color brightness, contrast by dynamic sample weight distribution (by correcting gray scale), correction according to temperature enlargement and transfer function (page 1,paragraphs 8,9, page 5,pargarph 132, page 7, paragraph 153, page 6, paragraphs 139-141, page 10, paragraphs 187-189, page 11-15, paragraphs 203-253).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Nishida in view of Tanikoshi et al. because while Nishida teaches how the control device 70 is provided for generating display signals to be supplied to the respective display units 50 through a signal transmission passage 71 (column 6, lines 30-33, figure 2 at 50, 70, 71), Tanikoshi et al.

teaches how such a device would be used to adjust display parameters. The motivation for combining these inventions would have been to provide a multiscreen display or plurality of displays apparatus capable of controlling parameters of a plurality of display units with attribute provided (Col. 9, Lines 29-33) and further in view of Zavracky et al. teaches in a multi display apparatus adjustment of color brightness, contrast by dynamic sample weight distribution (by correcting gray scale), correction according to temperature enlargement and transfer function. The motivation for combining these inventions would have been to provide a multiscreen display or plurality of displays apparatus capable of controlling vivid parameters of a plurality of display units with capability to control color, contrast, brightness, enlargement, temperature correction with reduced or minimal flickers and achieve high resolution (page 1,paragraphs 8,9, page 5,pargarph 132, page 7, paragraph 153, page 6, paragraphs 139-141, page 10, paragraphs 187-189, pages 11-15, paragraphs 203-257).

Regarding claim 39, Nishida modified by Tanikoshi et al. does not recite or disclose specifically how the display units adjustments operates in a frequency independent fashion. On the other hand, Zavracky et al. teaches this concept by teaching the display units adjustments operates in a frequency independent fashion by showing that even to reduce flickers display unit is adjusted independent of both horizontal and vertical (page 7, paragraph 153, pages 11-15, paragraphs 203-257).

Regarding claim 40, Tanikoshi et al. teaches an automatic pulse width adjustment is realized in the individual processing units to eliminate surface flickers (Col. 8,Lines 40-64).

Zavracky et al. teaches an automatic pulse width adjustment is realized in the individual processing units to eliminate surface flickers (page 7, paragraph 153, pages 11-15, paragraphs 203-257).

Regarding claims 41,43, 44, Nishida teaches how signal processing occurs at both the control device 70 and the display units 50 by teaching how the control device 70, electric power passage 61 and signal transmission passage 71 facilitates the control communication between the control device 70 and each of the display units 50 in the form of signal transmission passage 71 wherein data from this signal transmission passage are collected at every display unit 50 (column 6, lines 29-45, figure 2 at 50, 70, 71). Zavracky et al. teaches this concept by teaching the display units adjustments operates in a higher frequency to reduce surface flickers (page 7, paragraph 153, pages 11-15, paragraphs 203-257). Tanikosh et al. teaches raising line frequency in general processing unit to achieve high resolution (Col. 8, Line 65 to Col.9, Line 21). Tanikosh further teaches distributed geometry to achieve image geometry (Col.9, Lines 22-50) and control signal will determine which individual image should be displayed on predetermine display unit (Col. 9, Line 51 to Col. 10, line 53).

8. Claims 45-48,59 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nishida (U.S. 6,097,351) in view of Tanikoshi et al. (U.S. 5,634,018) as applied to claims 29-33, 37,38, 49,50,53-61 and further in view of Wong (U.S. 6,005,557).

Regarding claim 45, in further discussion of claim 29, Nishida modified by Tanikoshi et al. do not teach how the display device provides image stabilization. On the other hand, Wong teaches a method and apparatus for stabilizing an image formed on a display panel (column 1, lines 5-11).

Thus, it would have been obvious to a person of ordinary skill in the art to combine Nishida, Tanikoshi et al. and Wong because while the combination of Nishida modified by Tanikoshi et al. teach a display device with an array of display elements to display information in that the display device is made up of a plurality of display units 50 (see Abstract; see also column 6, lines 17-21, figure 2 at 50), Wong teaches a method and apparatus for stabilizing an image formed on a display panel (column 1, lines 5-11). The motivation for combining these inventions would have been to provide a user with a convenient adjustment technique that results in optimum stabilization (column 2, lines 10-15).

Regarding claim 46, in further discussion of claim 45, Wong teaches a time-dependent image stabilization by teaching a timer device 44 that controls the dot clock signal 42 via the HSYNC signal (column 4, lines 4-15). Also, Wong teaches a frequency dependent image stabilization by teaching apparatus 10 that includes a control apparatus 30 to enable the user to manually adjust the phase and frequency of the dot clock signal 42 wherein the frequency of the dot clock signal 42 may be adjusted to correspond to the frequency of the image information signal 12 (column 4, lines 8-15; column 3, lines 23-32, figure 1 at 10, 42).

Regarding claims 47and 59, in further discussion of claim 29, Nishida and Tanikoshi et al. do not teach how the display device provides a master clock correction in order to achieve image stabilization. On the other hand, Wong teaches how the dot_clk signal would be adjusted/corrected in order to appropriate image stabilization (column 6, lines 26-34, figures 6-9 at 39, 42). Thus, it would have been obvious to a person of ordinary skill in the art to combine Nishida, Tanikoshi et al. and Wong because while the combination of Nishida and Tanikoshi et al. teach a display device with an array of display elements to display information in that the display device is made up of a plurality of display units 50 (see Abstract; see also column 6, lines 17-21, figure 2 at 50), Wong teaches how the dot_clk signal would be adjusted/corrected in order to appropriate image stabilization (column 6, lines 26-34, figures 6-9 at 39, 42). The motivation for combining these inventions would have been to provide a user with a convenient adjustment technique that results in optimum stabilization (column 2, lines 10-15).

Regarding claims 48, 62 in further discussion of claims 47 and 53, Nishida teaches an embodiment wherein individual display units 80 include a main body 81 that contains three light emitting diodes 83R, 83G, 83B such that when activated, they present red, green and blue colors to the pixels (column 8, lines 41-67, figure 5 at 83R, 83G, 83B).

Allowable Subject Matter

9. Claim 42 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is an examiner's statement of reasons for allowance:

A method for displaying images on a display device, the display device including at least one general processing unit and a display comprising a plurality of display units with corresponding processing units, the method comprising the steps of: transmitting a data stream comprising **data concerning the image to be displayed from the general processing unit to the individual processing units; providing a control communication comprising a plurality of control signals between the general processing unit and each of the individual processing units, the control communication sent from the general processing unit to each of the individual processing units being individually distinct from the data stream sent to each processing unit; and collecting data from the data stream at each of the individual processing units as a function of control signals transmitted to the individual processing units; wherein the distributed signal processing is provided between the general processing unit and the individual units; further the step of providing a distributed signal processing for the signals related to the image display, and the step of raising and the line frequency in the general processing unit in order to eliminate interline flicker and to obtain higher image resolution.**

The cited references on 892's fails to teach above underlined bold claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

11. Applicant's arguments with respect to claims 29,53,33,34,38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tucker et al. (5,758,135) System and method for fast clocking a digital display in a multiple concurrent display system.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668. The examiner can normally be reached on M-F 8AM to 5PM.

14. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 571-272-7681. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

15. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

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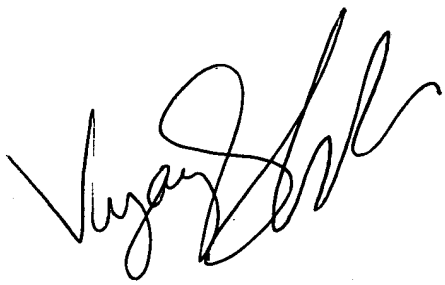
November 7, 2005



VIJAY SHANKAR
PRIMARY EXAMINER